Colour TV pattern generator

PM 5515

Operating card

9452 055 15...

9499 520 08711
86 01 15

This operating card belongs to the operating manual (OM) PM 5515, 9499 520 08601

PM 5515-T
PM 5515-TX

PM 5515-X
PM 5515

PHILIPS

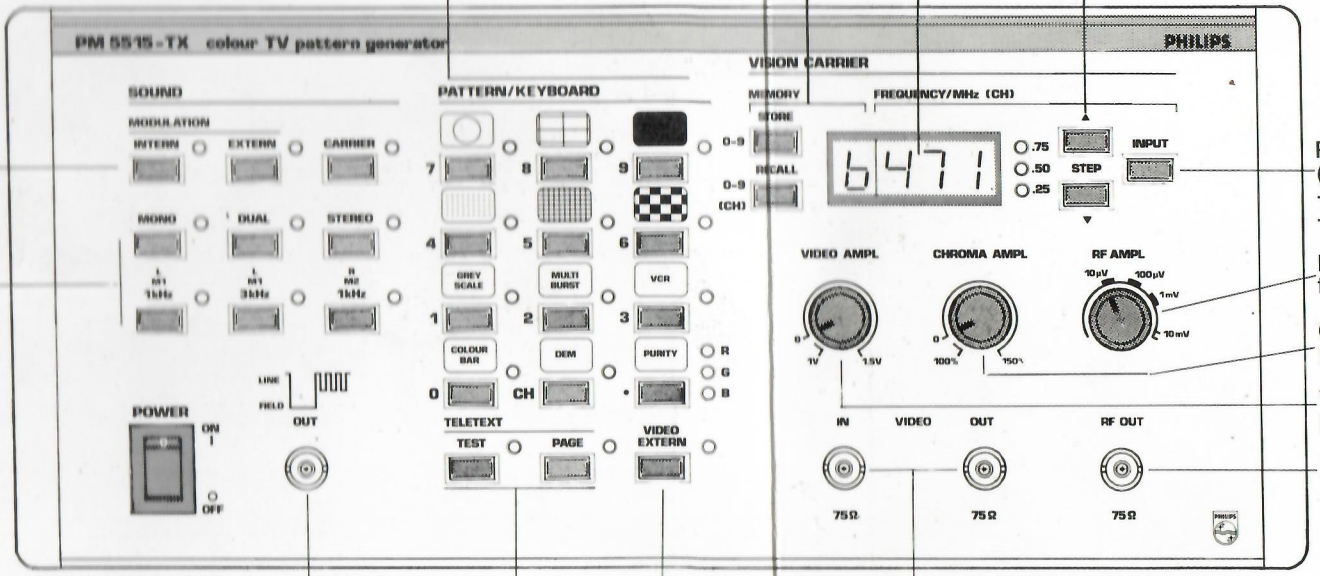
PATTERN or data (KEYBOARD)
dependent on button INPUT:
- single or combined patterns
- frequency of vision carrier (3 digits)
- TV channel (2 digits)
- memory locations 0…9

Memory functions:
- store or recall of 10 setups
- indication of actual memory position

Indication of vision carr. frequency
or TV channel number

Step function:
- fine adjustment of vision carrier frequency
- switch-over memory positions

Sound carrier, internal sound
1 kHz on/off or external sound
via socket AUDIO IN



Preparing KEYBOARD operation (data input):
(green inscription)
- vision carrier frequency
- TV channel number

RF carrier can be attenuated >60 dB
from 10mV

Chroma/burst amplitude 100% in stop
position, variable 0…150%

Video amplitude, 1 V_{pp} in stop
position, variable 0…1.5 V_{pp}

RF carrier output of >10 mV into 75 Ω

Combined line/field sync output
2.5 V_{pp} / 5 V_{pp} for trigger purpose

Separate video input / output to modulate by ext. video signal (CVBS/VBS)

PM 5515-X, PM 5515-TX:
1 or 2 sound carriers
mono, dual channel, stereo
int. sound 1 kHz / 3 kHz on/off or
ext. mono/stereo signal via
socket AUDIO IN.

PM 5515-T, PM 5515-TX:
selection of teletext mode
1 test page, 5 text pages

Switch-over internal/external
video modulation

Short form instruction

Vision carrier frequency (MHz)

OM chapter 3.5.3.

frequency range: 32...300 MHz, 470...900 MHz
format: 0XX or XX.X <100 MHz
(3 digit input) XXX ≥100 MHz

correction: RECALL

example: VHF frequency (E5) 175.25 MHz

action: INPUT 1 7 5 △ STEP

display: 175.25 Hz

Frequency tuning

OM chapter 3.5.3

frequency steps: 100 kHz <45 MHz
(resolution) 250 kHz >45 MHz

indication: .X (display) <45 MHz
3 LEDs >45 MHz

display: .25 /50/.75

tuning direction: up (△ STEP) down (STEP ▽)

example: VHF frequency (E5) 175.25 MHz
tuning range ±750 kHz

action: INPUT 1 7 5 △ STEP

display: 175.25 MHz

△ STEP (3 steps up)

176 MHz

STEP ▽ (6 steps down)

174.50 MHz

STORE function

OM chapter 3.5.9.

For frequency, pattern, sound, TV channel

correction: [RECALL]

example: vision carrier 543.25 MHz
memory place 1
TV channel 30 (UHF/IV system G)

action:	[INPUT]	[5]	[4]	[3]	[STEP △]	display: 543.25 MHz
	[STORE]	[1]				1/543.25 MHz
	[INPUT]	[CH]	[3]	[0]		1/C30

RECALL function

OM chapter 3.5.10.

memory locations 0...9

action: [RECALL] [0...9]

TV channel number 0...99

action: [RECALL] [CH] [0...9] [0...9]

steps from/to memory locations 0...9

action: [RECALL] [STEP △] or [RECALL] [STEP ▽]

correction for RECALL modes: [INPUT]

Pattern survey double combinations

Pattern	Circle	Centre cross	White pattern	Dots	Crosshatch	Checkerboard	Greyscale	Multiburst	VCR pattern	Colour bar	DEM pattern	Purity patterns	Black pattern
Circle		x	x	x	x	x	x	x	x	x	x	x	x
Centre cross	x		x	x	x							x	x
White pattern	x	x		x	x		x	x		x			
Dots	x	x	x										x
Crosshatch	x	x	x										x
Checkerboard	x												
Greyscale	x		x					x		x			
Multiburst	x		x				x			x			
VCR pattern	x												
Colour bar	x		x				x	x					
DEM pattern	x												
Purity patterns	x	x											
Black pattern	x	x		x	x								

Special test pattern

Pattern	PURITY red	PURITY green	PURITY blue	COLOUR BAR
shifted colour staircase	x*			x
6 horizontal colour bars		x*		x
black/white target			x*	x

* must be switched on first

VHF/UHF-channel frequencies for different TV systems
VHF band I and band III channels

B and C			D		K and K1		M and N	
Channel	Vision	Sound	Vision	Sound	Vision	Sound	Vision	Sound
1			49.75	56.25				
2	48.25	53.75	59.25	65.75			55.25	59.75
3	55.25	60.75	77.25	83.75			61.25	65.75
4	62.25	67.75	85.25	91.75	175.25	181.75	67.25	71.75
5	175.25	180.75	93.25	99.75	183.25	189.75	77.25	81.75
6	182.25	187.75	175.25	181.75	191.25	197.75	83.25	87.75
7	189.25	194.75	183.25	189.75	199.25	205.75	175.25	179.75
8a								
8	196.25	201.75	191.25	197.75	207.25	213.75	181.25	185.75
9	203.25	208.75	199.25	205.75	215.25	221.75	187.25	191.75
10	210.25	215.75	207.25	213.75			193.25	197.75
11	217.25	222.75	215.25	221.75			199.25	203.75
12	224.25	229.75	223.25	229.75			205.25	209.75
13							211.25	215.75
14								

AUSTRALIA (B)			IRELAND (I)			ITALY (B)		
Ch	Vision	Sound	Ch	Vision	Sound	Ch	Vision	Sound
0	46.25	51.75	IA	45.75	51.75	A	53.75	59.25
1	57.25	62.75	IB	53.75	59.75	B	62.25	67.75
2	64.25	69.75	IC	61.75	67.75	C	82.25	87.75
3	86.25	91.75	ID	175.25	181.25	D	175.25	180.75
4	95.25	100.75	IE	183.15	189.25	E	183.75	189.25
5	102.25	107.75	IF	191.25	197.25	F	192.25	197.75
5a	138.25	143.75	IG	199.25	205.25	G	201.25	206.75
6	175.25	180.75	IH	207.25	213.25	H	210.25	215.75
7	182.25	187.75	IJ	215.25	221.25	L	217.25	222.75
8	189.25	194.75						
9	196.25	201.75						
10	209.25	214.75						
11	216.25	221.75						

Special cable TV channels (CATV)

Band	Channel*	Vision	Sound	Band	Channel	Vision	Sound
I	S1	69.25	74.75	III	U1/S11	231.25	236.75
I	S2	76.25	81.75	III	U2/S12	238.25	243.75
I	S3	83.25	88.75	III	U3/S13	245.25	250.75
III	M1 /S1	105.25	110.75	III	U4/S14	252.25	257.75
III	M2 /S2	112.25	117.75	III	U5/S15	259.25	264.75
III	M3 /S3	119.25	124.75	III	U6/S16	266.25	271.75
III	M4 /S4	126.25	131.75	III	U7/S17	273.25	278.75
III	M5 /S5	133.25	138.75	III	U8/S18	280.25	285.75
III	M6 /S6	140.25	145.75	III	U9/S19	287.25	292.75
III	M7 /S7	147.25	152.75		S20	294.25	299.75
III	M8 /S8	154.25	159.75				
III	M9 /S9	161.25	166.75	* S channels in band I are only used in Belgium			
III	M10/S10	168.25	173.75				

UHF band IV and band V channels

SYSTEMS: I, G, H, K and L					
Band	Channel	Vision C.	Band	Channel	Vision C.
	21	471.25		51	711.25
	22	479.25		52	719.25
	23	487.25		53	727.25
	24	495.25		54	735.25
	25	503.25		55	743.25
	26	511.25		56	751.25
	27	519.25		57	759.25
	28	527.25		58	767.25
	29	535.25		59	775.25
IV	30	543.25	V	60	783.25
	31	551.25		61	791.25
	32	559.25		62	799.25
	33	567.25		63	807.25
	34	575.25		64	815.25
	35	583.25		65	823.25
	36	591.25		66	831.25
	37	599.25		67	839.25
	38	607.25		68	847.25
	39	615.25		69	855.25
	40	623.25		70	863.25
	41	631.25		71	871.25
	42	639.25		72	879.25
	43	647.25		73	887.25
V	44	655.25		74	895.25
	45	663.25			
	46	671.25			
	47	679.25			
	48	687.25			
	49	695.25			
	50	703.25			

(sound carrier dependent on TV system)

SYSTEMS: M, N and Japan						
Channel		Vision C.	Sound C.	Channel		Vision C.	Sound C.
14		471.25	475.75	49	48	681.25	685.75
15		477.25	481.75	50	49	687.25	691.75
16		483.25	487.75	51	50	693.25	697.75
17		489.25	493.75	52	51	699.25	703.75
18		495.25	499.75	53	52	705.25	709.75
19		501.25	505.75	54	53	711.25	715.75
20		507.25	511.75	55	54	717.25	721.75
21		513.25	517.75	56	55	723.25	727.75
22		519.25	523.75	57	56	729.25	733.75
23		525.25	529.75	58	57	735.25	739.75
24		531.25	535.75	59	58	741.25	745.75
25		537.25	541.75	60	59	747.25	751.75
26		543.25	547.75	61	60	753.25	757.75
27		549.25	553.75	62	61	759.25	763.75
28		555.25	559.75	63	62	765.25	769.75
29		561.25	565.75	64	Japan	771.25	775.75
30		567.25	571.75	65		777.25	781.75
31		573.25	577.75	66		783.25	787.75
32		579.25	583.75	67		789.25	793.75
33		585.25	589.75	68		795.25	799.75
34		591.25	595.75	69		801.25	805.75
35		597.25	601.75	70		807.25	811.75
36		603.25	607.75	71		813.25	817.75
37		609.25	613.75	72		819.25	823.75
38		615.25	619.75	73		825.25	829.75
39		621.25	625.75	74		831.25	835.75
40		627.25	631.75	75		837.25	841.75
41		633.25	637.75	76		843.25	847.75
42		639.25	643.75	77		849.25	853.75
43	Japan	645.25	649.75	78		855.25	859.75
44		651.25	655.75	79		861.25	865.75
45		657.25	661.75	80		867.25	871.75
46	45	663.25	667.75	81		873.25	877.75
47	46	669.25	673.75	82		879.25	883.75
48	47	675.25	679.75	83		885.25	889.75.